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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,393

05/08/2006

Toshio Sakurai

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ALEXANDRIA, VA 22320-4850

EXAMINER

PATEL, REEMA

ART UNIT

PAPER NUMBER

2812

MAIL DATE

DELIVERY MODE

06/23/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,393	Applicant(s) SAKURAI ET AL.	
	Examiner REEMA PATEL	Art Unit 2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-11, 19 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12, 15 and 18 is/are rejected.
- 7) ☒ Claim(s) 13, 14, 16 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/13/06, 6/8/06, 1/2/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 12-18 in the reply filed on 4/8/09 is acknowledged. The traversal is on the ground(s) that there is no serious burden in the search and examination of claims 19 and 20 with claims 12-18. This is not found persuasive. Firstly, the restriction is proper because there was no special technical feature among all of the claims (see Requirement for Restriction, 3/24/09). Additionally, claims 19-20 are method claims while claims 12-18 are device claims. This requires examination into different search areas and entails different search strategy which may be considered burdensome.

The requirement is still deemed proper and is therefore made FINAL.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The information disclosure statements (IDS) were submitted on 1/13/06, 6/8/06, and 1/2/08. The submissions are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements have been considered by the examiner.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2812

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakagami et al. (JP 2002-289604; "Sakagami") in view of Kohmura et al. (WO 2004/026765 A1; English equivalent U.S. 2006-0040110 A1, "Kohmura").

6. Regarding claims 12, 15, and 18, Sakagami discloses a low dielectric constant film in an electronic device comprising at least fine diamond particles and pores (Abstract). Yet, Sakagami does not disclose that the surface of the fine diamond and pores are treated with at least a single substrate of (a) or a mixture of (a) and (b), where (a) and (b) are defined in claim 12 of the instant application. However, Kohmura discloses a porous film may be treated with dimethyltetramethoxydisiloxane ([0087], [0097]) which has the advantage of improving mechanical strength. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Sakagami with treating the low dielectric constant film comprising diamond particles and pores with dimethyltetramethoxydisiloxane, so as to improve mechanical strength.

Allowable Subject Matter

7. Claims 13, 14, 16, 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. These claims contain allowable subject matter because of implications that the low dielectric constant film is

Art Unit: 2812

treated with a mixture of at least one of (a) and at least one of (b), where (a) and (b) are defined in applicant's instant claim 12.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to REEMA PATEL whose telephone number is (571)270-1436. The examiner can normally be reached on M-F, 8:00-4:30 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Garber can be reached on (571)272-2194. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Walter L. Lindsay, Jr./
Primary Examiner, Art Unit 2812

/R. P./
Examiner, Art Unit 2812
6/19/09